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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
JAMES H. STEPHENS	: EXAMINER: SHAW, P. A.
SERIAL NO: 10/045,303	:
FILED: OCTOBER 29, 2001	: GROUP ART UNIT: 2144
FOR: SYSTEM AND METHOD FOR MODELING VIDEO NETWORK RELIABILITY	:

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Appellants submit herewith their appeal of the Final Rejection presented in the Office Action dated May 12, 2008.

Remarks/Arguments begin on page 2 of this paper.

REMARKS

This is an appeal of the Final Rejection dated May 12, 2008 of Claims 1, 3, 5-13, and 15-20. A Notice of Appeal from this Final Rejection was timely filed on August 12, 2008.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee, TANDBERG TELECOM AS.

II. RELATED APPEALS AND INTERFERENCES

Appellants' legal representatives and the assignee are aware of no appeals which will directly affect or be directly affected by or have any bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

In the Official Action dated March 12, 2008, Claims 1, 5-6, 11-13, 16, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Natarajan et al. (U.S. Patent No. 6,505,244, hereinafter Natarajan) in view of Weisman et al. (U.S. Patent No. 7,171,475, hereinafter Weisman); and Claims 3, 7-10, 15, and 17-19 were rejected under 35 U.S.C. §103(a) as unpatentable over Natarajan, Wiesmann, and further in view of Evans (U.S. Patent No. 5,694,524).

IV. STATUS OF THE AMENDMENTS

Appellants' latest amendment was filed on February 7, 2008 and was entered. All previous amendments were entered.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

While video conferencing has grown in popularity as businesses prefer more personal communications, video networks have grown in complexity.[1] Video calls require the interfacing of plural network devices manufactured by plural manufacturers and

[1] Specification, page 2, lines 1-10.

communication protocols/interfaces.[2] It is not unusual to encounter technical difficulties in video conferences using three or more endpoints.[3] Conventionally, video network administrators have relied primarily on personal experience and intuition when troubleshooting problems in video networks.[4]

Non-limiting embodiments of the present invention provide new ways to improve video network reliability. For example, historical data of previous video conferences are stored in a call history table (e.g, Fig. 3). An analysis of the historical data provides results which more effectively guide administrators in configuring video network for specific video calls.[5] Furthermore, the historical data can be analyzed to determine ways to improve the video call.[6] The quality of a subsequent or new video conference can be improved by the analysis of the call history table. A new call may be identified by a record that includes known characteristics for the new call (i.e., from-subnet, from-endpoint, to-subnet, to-endpoint, whether an MCU will be required).[7] The known attributes of the new call may be used to identify a call configuration with a high probability of success.[8]

Briefly recapitulating, Claim 1 is directed to a method for modeling video conferencing network reliability. The method includes obtaining historical data for multiple video conferences, and storing the historical data in a call history table (e.g., item 102 in Figure 3). The historical data includes video conferencing equipment vendor or model identification information (e.g., specification, page 7, line 30 – page 8, line 22; Figures 3-5). The method also includes executing a modeling algorithm (e.g., item 101 in Figure 6; specification, page 9, lines 1-7) that produces a model representing the historical data, which includes executing a decision tree algorithm (e.g., specification, page 4, lines 9-11) ,

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[2] Specification, page 2, lines 11-13.
[3] Specification, page 2, lines 24-26.
[4] Specification, page 2, lines 27-28.
[5] Specification, page 4, lines 23-25.
[6] Specification, page 10, line 27 to page 11, line 10.
[7] Specification, page 11, lines 18-22.
[8] Specification, page 11, lines 22-23.

analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences (e.g., specification, page 9, line 16 – page 10, line 2), configuring a video teleconferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes (e.g., specification, page 10, line 15 – page 11, line 6), and conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with the undesirable outcomes (e.g., Fig. 2, and specification, page 11, lines 11-30). Independent Claims 11 and 20 are directed to a corresponding computer storage medium and data processing system.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The first issue is whether Natarajan or Weisman discloses or suggests Appellants' historical data including video conferencing equipment vendor or model identification information (e.g., specification, page 7, line 30 – page 8, line 22; Figures 3-5).

The second issue is whether Natarajan discloses or suggests Appellants' obtaining historical data for multiple video conferences, and storing this multi-conference historical data in a call history table.

The third issue is whether Natarajan discloses or suggests Appellants' steps of executing a modeling algorithm (e.g., item 101 in Figure 6; specification, page 9, lines 1-7) that produces a model representing the historical data, analyzing the model, configuring a video teleconferencing network based on the analysis, and conducting a new video conference call with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

VII. ARGUMENT

Natarajan describes a feedback-based adaptive network wherein at least a portion of the network elements report operating information relating to network conditions to a centralized data store.[9] The information which is reported to the data store is analyzed by a policy engine which includes a plurality of application specific plug-in policies for analyzing selected information from the data store and for computing updated control information based upon the analysis of the information.[10] The updated control information is fed back to selected network elements to thereby affect operation of the selected elements.[11]

Natarajan does not disclose or suggest Appellants' call history table or Appellants' steps of executing a modeling algorithm that produces a model representing the historical data, analyzing the model, configuring a video teleconferencing network based on the analysis, and conducting a new video conference call with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

A. Both Natarajan and Weisman do not disclose or suggest Appellants' historical data including conferencing equipment vendor or model identification information.

As acknowledged in the Official Action,[12] Natarajan does not disclose or suggest Appellants' historical data including conferencing equipment vendor or model identification information. To cure this deficiency, the Official Action points to Weisman,[13] column 5, lines 38-53. However, this passage of Weisman merely refers to a discussion of a registered device provider DLL. A registered device provider DLL is not "historical data including conferencing equipment vendor or model identification information."

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[9] Natarajan, Abstract.
[10] *Id,*
[11] *Id.*
[12] Official Action, page 5, lines 19-20.
[13] Official Action, page 6, line 21 to page 7.

Weisman describes a peer network host. Device host API 102 enables software modules (the hosted devices 108-109 and bridges 110 for bridged devices 112) to publish themselves as peer networking-enabled devices.[14] These software modules are referred to collectively as "hosted devices" in Weisman.[15] The hosted devices 108-110 register themselves with the Device Host 100 by providing information about their properties.[16] This is done so that the Device Host can respond to discovery, presentation, and control requests from other peer networking devices.[17]

The registration in Weisman facilitates peer networking and is not historical data for multiple video conferences that includes video conferencing equipment vendor or model identification information.

B. Natarajan does not disclose or suggest Appellants' obtaining historical data for multiple video conferences, and storing this multi-conference historical data in a call history table.

The Official Action mailed May 12, 2008 refers to Figure 15 of Natarajan for a disclosure of Appellants' storing this multi-conference historical data in a call history table.[18] This figure shows an example of a flow diagram for a data store event handler reporting procedure 1500. Procedure 1500 may be implemented via the event handling entity 272 residing at data store 252. One responsibility of event handler 272 is to continually monitor the data store for new or updated control information which has been generated by the network elements or by the policy engine 254. When event handler 272 detects the occurrence or availability of a new control parameter, it notifies the event server 270 which

[14] Weisman, col. 4, lines 1-4.
[15] Weisman, col. 4, lines 4-5.
[16] Weisman, col. 4, lines 27-29.
[17] Weisman, col. 5, lines 29-32.
[18] Official Action, mailed May 12, 2008, page 3, last line, to page 4, line 1.

distributes the event notification message onto the appropriate network element(s).[19] Thus, data store 252 stores data relative to events used by or relating to event handler 272. However, this event data is not Appellants' historical data for ***multiple*** video conferences. That is, the event data of Natarajan has no persistence from one process to another. Said differently, the event data of Natarajan pertains to a single video teleconference, not to multiple video teleconferences as required by Appellants' claims.

To understand this point, it is first necessary to identify what constitutes event data in Natarajan. While the word "event" is used 247 times in Natarajan, the term 'event' is never explicitly defined. However, an implied definition may be derived from the following examples of events disclosed in Natarajan:

- ...notification for specified events, such as, for example, the availability of updated control information at data store 252.[20]

- Yet another purpose of the event handler is to monitor specified network elements, and report the detection of specified events (e.g. detected errors) to event server 270. In an alternate embodiment, the event handler is statically pre-configured so that when it is initialized, it automatically monitors a specified network element for specific types of events and reports detected events to event server 270. For example, when an error is detected by network element 204A, the event handler 274A will report the error to event server 270 to be forwarded to other network and/or control elements (e.g. policy engine 254), which may be interested in this type of information.[21]

- Event handler 272 continually monitors the data store for updated control information and other events.[22]

- The policy engine may either repeatedly poll the data store for updated network data, or rely on an event service to be notified that a change in the network conditions has occurred.[23]

- The application specific policy may be automatically loaded upon on initialization of the policy analysis procedure, or may be loaded subsequently upon the occurrence of an event, such as, for example, the execution of a specific user application.[24]

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[19] Natarajan, column 25, lines 27-55.
[20] Natarajan, column 10, lines 21-25.
[21] Natarajan, column 10, lines 41-57.
[22] Natarajan, column 10, line 67 – column 11, line 1.
[23] Natarajan, column 13, line 66 – column 14, line 2.
[24] Natarajan, column 15, lines 42-46.

- The event handler 274A may initially consult a local configuration file (not shown) in order to determine which events the network element is to register for at the event server 270.[25]

However, none of these events are related to **multiple** video teleconferences as required by Appellants' claims. That is, there is no indication that an error of one process (e.g., conference) to be used in another process (e.g., conference). There also is no rationale for an error of one process (e.g., conference) to be used in another process (e.g., conference). Similarly, there is indication that any of the other examples of events described in Natarajan arising in a first process (e.g., conference) would be applicable to a second process (e.g., conference).

The Official Action of May 12, 2008 also cites to column 7, lines 12-43 of Natarajan for a disclosure of Appellants' claimed storing of historical data of **multiple** conferences in a call history table. Appellants traverse this finding and note that the cited passage of Natarajan recites:

> "The feedback-based adaptive network of the present invention utilizes a technique wherein at least a portion of the network elements (e.g., 204A, 204B, 208A, 208B, etc.) report network information relating to network conditions to a centralized data storage entity (e.g., data store 252). The reported data corresponds to information relating to the current condition or status of each of the reporting network elements in the network. The information which is reported to the data store 252 is analyzed by a policy engine 254. The policy engine 254 includes a plurality of application specific plug-in policies for analyzing application specific information from the data store and for computing updated control information based upon the analysis of the information. The updated control information may include any type of information, parameters, and/or actions which may be used to affect the operation of one or more network elements. The updated control information is then fed back to selected network elements to thereby affect operation of the selected elements and/or network. Typically, when the operation of a network element has been affected, its corresponding operating parameters and/or operating information will change. The changed operating parameters are then reported to the data store 252 and analyzed by the policy engine 254. The policy engine may then generate new or updated control information or parameters for affecting the operation of selected elements in the network. In

[25] Natarajan, column 19, lines 25-28.

> this way, the network of FIG. 2 is configured to adapt to changing conditions in the network by providing a dynamic feedback mechanism. Using this dynamic feedback mechanism, selected network elements may be dynamically and automatically reconfigured to cause the performance of various aspects of the network to conform with desired performance criteria."

Appellants first submit that the above-cited passage of Natarajan discloses nothing related to call history or a call history table. The only data apparently stored in this passage is "changed operating parameters are then reported to the data store 252." However, neither the recited changed operating parameters nor any other information (e.g., the control information and parameter information analyzed by the policy engine 254) is call history data, let alone call history data of **multiple** video conferences.

First, as with the previous discussion of 'events', there is no indication that "current conditions" of equipment involved in one process (e.g., conference) are used in another process (e.g., conference). There also is no rationale for "current conditions" of equipment involved one process (e.g., conference) to be used in another process (e.g., conference). The process, events and models of Natarajan are directed exclusively to single video teleconferences, and not to management of multiple video teleconferences via use of historical data.

Indeed, the only reference to a video teleconference in Natarajan is found relative to the example of Figures 16-18 ("Using the network illustrated in FIG. 16, various aspects of the present invention will now be described by way of example in which a video teleconference is established between user1 (1602) and user2 (1620). The video teleconference example is described in greater detail with respect to FIGS. 17 and 18 of the drawings.").[26] A review of the entirety of column 29, line 36 – column 33, line 62 reveal that the events monitored relate to a ***single*** video teleconference, not to multiple video teleconferences as required by Appellants' independent claims.

[26] Natarajan, column 29, lines 53-58.

Natarajan does not disclose or suggest storing historical data for multiple video conferences in a call history table.

C. Natarajan does not disclose or suggest Appellants' steps of executing a modeling algorithm that produces a model representing the historical data, analyzing said model, and configuring a video teleconferencing network based on said analysis.

Pages 14-15 of the Office Action refers to Fig. 17 of Natarajan when addressing the above-noted elements of Claim 1. The Office's interpretation of Fig. 17 of Natarajan is incorrect.

Figure 17 of Natarajan shows a flow diagram of how the feedback-based network of Figure 16 adapts to changing conditions in the network as a video teleconference is initiated between user 1 and user 2. A video teleconference application between user 1 and user 2 is one example of a user application which may require additional bandwidth in order to provide a satisfactory level quality for using the application to service multiple users across the network. Thus, the video teleconference example may be abstracted to be applied to any user application requiring additional network resources to provide a satisfactory level of quality for the application to run over a network environment. When a video teleconference begins between users 1 and 2, the network may respond by initiating *one or more bandwidth policies* at the policy engine 1654 and may also respond by initiating one or more policies/procedures at the monitor system 1662.[27]

At 1704 in Figure 17 of Natarajan the frame relay CIR policy is initiated at the policy engine 1654 if this policy has not already been initiated. While the frame relay CIR policy is being initiated by the policy engine at 1704, a CIR policy monitor procedure is concurrently initiated (1716) at monitor system 1662, if this procedure has not already been initiated. At 1706, each of the links a, b, c, d of Figure 16 reports the number of packets dropped on that

[27] Natarajan, column 29, line 36 through column 30, line 66.

link to data storage 1652. The frame relay CIR policy at the policy engine 1654 uses this data to generate (1708) updated CIR parameter values for each of the respective links. The updated CIR parameter values generated by the policy engine are then written (1710) into the data store 1652. Once the appropriate network elements have been notified of changed network conditions, each of the network elements may retrieve a respective updated CIR parameter information from the data store 1652 and then update its configuration using the updated CIR parameter information.[28]

In the CIR policy monitor procedure of Figure 17, the quality monitor system 1662 (FIG. 16) may concurrently and continuously monitor the effectiveness of the frame relay CIR policy implemented by the policy engine. In the example of Figure 17, the effectiveness of the frame relay CIR policy is measured by analyzing the number of packets dropped at each of the respective links A, B, C, D, and comparing this data to predetermined criteria or guidelines. Thus, for example, at **1718**, the reported number of packets dropped for links A, B, C, D are analyzed and compared to a predetermined threshold in order to evaluate the effectiveness of the frame relay CIR policy implemented by the policy engine. A determination is then made (**1720**) as to whether the frame relay CIR policy is effective in maintaining the number of dropped packets on each or any of the respective links below the predetermined threshold value. If it is determined that the current frame relay CIR policy is effective in maintaining the number of dropped packets on each of the respective links below a predetermined threshold, the quality monitor system 1662 may wait (1722) a specified time interval (e.g., 0-30 minutes) before re-evaluating the effectiveness of the current frame relay CIR policy by analyzing newly updated information relating to the number of packets dropped at each of the respective links.[29]

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[28] Id.
[29] Natarajan, column 31, lines 33-57.

However, contrary to the Official Action, none of the data monitoring and analysis of these, or any other, passage of Natarajan relates to Appellants claimed executing a modeling algorithm that produces a model ***representing the historical data***, analyzing said model, and ***configuring a video teleconferencing network*** based on said analysis. That is, for the reasons previously presented, Natarajan does not monitor or use Appellants' claimed historical data. Also, the monitored, stored and analyzed event data of Natarajan is not used for **configuring a video teleconferencing network**. Instead, the data is used to assess the viability of a current frame relay CIR policy. Nothing in Natarajan discusses configuring or reconfiguring a video teleconferencing network based on the event data.

D. Natarajan does not disclose or suggest Appellants' step of conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes

The Office Action relies on Figure 17 of Natarajan to describe the above-noted elements of Claim 1. However, Figure 17 of Natarajan does not describe or suggest "conducting ***a new video conference*** with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes." Page 5 of the Office Action cites to elements 1720, 1724, 1726, and 1728 of Figure 17 of Natarajan when rejecting Claim 1. Element 1702 of Natarajan indicates that an initial video conference is initiated. However, elements 1720, 1724, 1726, and 1728 merely describe evaluating a current policy, and dynamically modifying the current policy. This is all done during the call initiated at block 1702. There is no "conducting a new video conference" that avoids the problems determined by elements 1720, 1724, 1726, and 1728 of Natarajan.

The Office Action also cites to col. 2, lines 15-43 of Natarajan for this element of Claim 1. However, this section of Natarajan merely describes retrieving information during a current video conference, and updating control information based on the retrieved

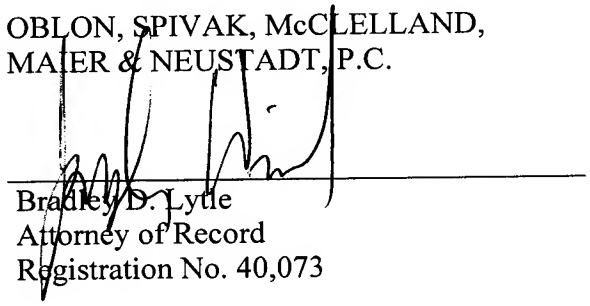
information for that current video conference. This is no disclosure or suggestion of conducting a new video conference that is configured to avoid the problem encountered during the current video conference.

VIII. CONCLUSION

Appellants have considered Evans, and submit Evans does not cure the deficiencies of Natarajan and Weisman. As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claims 1, 11 and 20, Applicants submit the inventions defined by Claims 1, 11 and 20, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.[30] Thus, Appellants request that the rejections applied under 35 U.S.C. §103(a) to Claims 1, 11 and 20 be reversed for the above-noted reasons.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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[30] MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

IX. CLAIMS APPENDIX

Claim 1 (Rejected): A method for modeling video conferencing network reliability, the method comprising:

obtaining historical data for multiple video conferences;

storing said historical data in a call history table, said historical data including video conferencing equipment vendor or model identification information;

executing a modeling algorithm that produces a model representing the historical data, which includes executing a decision tree algorithm;

analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences;

configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes; and

conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

Claim 2 (Canceled).

Claim 3 (Rejected): The method of Claim 1, wherein the operation of executing a decision tree algorithm comprises executing an ID3-based algorithm.

Claim 4 (Canceled).

Claim 5 (Rejected): The method of Claim 1, further comprising:

updating the historical data to create new historical data that includes values representing characteristics of the new video conference;

executing the modeling algorithm to produce a new model representing the new historical data;

analyzing the new model to produce a result; and

reconfiguring the video conferencing network according to the result.

Claim 6 (Rejected): The method of Claim 1, further comprising:

evaluating the model to determine whether the model provides a desired level of efficacy; and

in response to determining that the model does not provide a desired level of efficacy, using a different modeling algorithm to produce a different model.

Claim 7 (Rejected): The method of Claim 1, wherein:

the method further comprises building a training set from the historical data;

the operation of executing the modeling algorithm comprises applying the modeling algorithm to the training set; and

the operation of analyzing the model comprises:

deriving a rule set from the model; and

analyzing the rule set to identify the characteristics associated with undesirable outcomes for the video conferences.

Claim 8 (Rejected): The method of Claim 7, wherein:

the historical data includes attribute values for attributes of each video conference and an outcome value representing an outcome for each video conference; and

the operation of applying the modeling algorithm to the training set comprises:

using the outcome values as categorical attributes for the modeling algorithm; and

using the attribute values as non-categorical attributes for the modeling algorithm.

Claim 9 (Rejected): The method of Claim 7, wherein:

the operation of obtaining historical data for multiple video conferences comprises obtaining a first endpoint identifier, a first endpoint vendor, a second endpoint identifier, a second endpoint vendor, and an outcome value for the multiple video conferences;

the operation of building a training set comprises including the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences in the training set; and

the operation of executing the modeling algorithm comprises using the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences to produce the model.

Claim 10 (Rejected): The method of Claim 7, wherein:

the training set includes values representing a first set of attributes; and

the method further comprises:

evaluating the model to determine whether the model provides a desired level of efficacy;

in response to determining that the model does not provide a desired level of efficacy, building a different training set that includes a different set of attributes; and

applying the modeling algorithm to the different training set to produce a different model.

Claim 11 (Rejected): A computer storage medium storing instructions, which when executed by a computing device, causes the computing device to perform functions comprising:

obtaining historical data for multiple video conferences;

storing said historical data in a call history table, said historical data including vendor or model identification information; and

executing a modeling algorithm that produces a model representing the historical data, which includes executing a decision tree algorithm;

analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences;

configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes; and

conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

Claim 12 (Rejected): The computer storage medium of Claim 11, wherein the functions further comprise:

outputting results that reveal at least one of the opportunities for improving reliability of the video conferencing network, such that a user can reconfigure the video conferencing network, based on the results, to improve reliability of the video conferencing network.

Claim 13 (Rejected): The computer storage medium of Claim 11, wherein the functions further comprise:

analyzing the model to identify the one or more opportunities for improving reliability of the video conferencing network; and

automatically reconfiguring the video conferencing network, based on the identified opportunities, to improve reliability of the video conferencing network.

Claim 14 (Canceled).

Claim 15 (Rejected): The computer storage medium of Claim 11, wherein:

the executing the decision tree algorithm comprises executing an ID3-based algorithm.

Claim 16 (Rejected): The computer storage medium of Claim 11, wherein the functions further comprise:

updating the historical data to create new historical data that includes values representing characteristics of a new video conference;

executing the modeling algorithm to produce a new model representing the new historical data;

analyzing the new model to produce a result; and

reconfiguring the video conferencing network according to the result to improve reliability of the video conferencing network.

Claim 17 (Rejected): The computer storage medium of Claim 11, wherein the functions further comprise:

building a training set from the historical data;

executing the modeling algorithm by applying the modeling algorithm to the training set; and

deriving a rule set from the model, such that the one or more opportunities for improving reliability of a video conferencing network can be identified with the rule set.

Claim 18 (Rejected): The computer storage medium of Claim 17, wherein:

the historical data includes attribute values for attributes of each video conference and an outcome value representing an outcome for each video conference;

the modeling algorithm uses the outcome values as categorical attributes; and

the modeling algorithm uses the attribute values as non-categorical attributes.

Claim 19 (Rejected): The computer storage medium of Claim 17, wherein the functions further comprise:

obtaining a first endpoint identifier, a first endpoint vendor, a second endpoint identifier, a second endpoint vendor, and an outcome value for the multiple video conferences;

storing in the training set the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences; and

using, by the modeling algorithm, the first endpoint identifier, the first endpoint vendor, the second endpoint identifier, the second endpoint vendor, and the outcome value for the multiple video conferences to produce the model.

Claim 20 (Rejected): A data processing system for modeling video conferencing network reliability, the data processing system comprising:

one or more processing units; and

a computer storage medium storing instructions, which when executed by the one or more processing units, causes the one or more processing units to perform functions including

obtaining historical data for multiple video conferences;

storing said historical data in a call history table, said historical data including vendor or model identification information; and

executing a modeling algorithm that produces a model representing the historical data, which includes executing a decision tree algorithm;

analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences;

configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes; and

conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes.

X. EVIDENCE APPENDIX

None.

XI. RELATED PROCEEDINGS APPENDIX

None.